

2006 Executive Energy Forum Mont Tremblant, Quebec

June 18, 2006

The U.S. Energy Policy Act of 2005

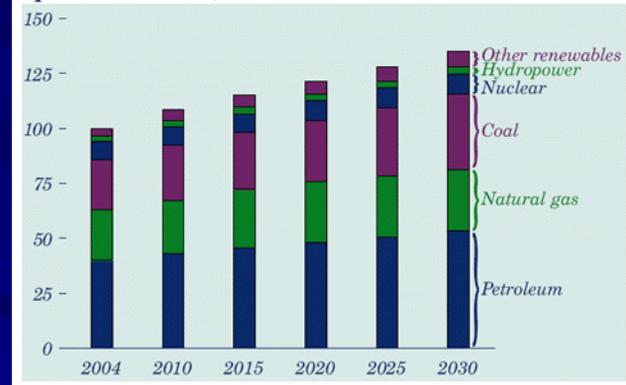
Barry K. Worthington
Executive Director
U.S. Energy Association



Demand Growth

Coal and Petroleum Lead Increases in Primary Energy Use

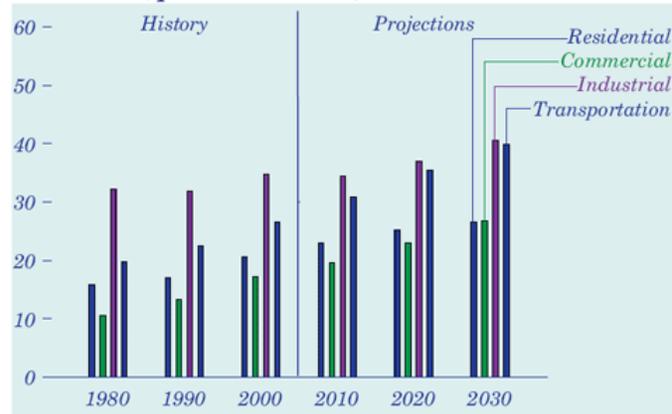
Figure 32. Primary energy use by fuel, 2004-2030 (quadrillion Btu)



Source: Energy Information Administration

U.S. Primary Energy Use Climbs to 134 Quadrillion Btu in 2030

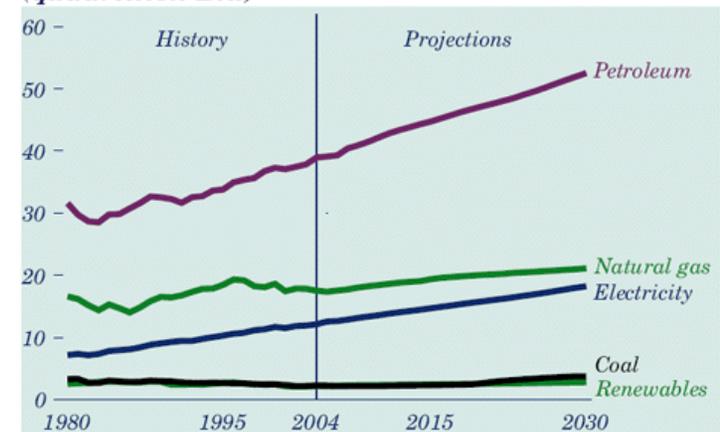
Figure 34. Primary energy consumption by sector, 1980-2030 (quadrillion Btu)



Source: Energy Information Administration

Petroleum and Electricity Lead Growth in Energy Consumption

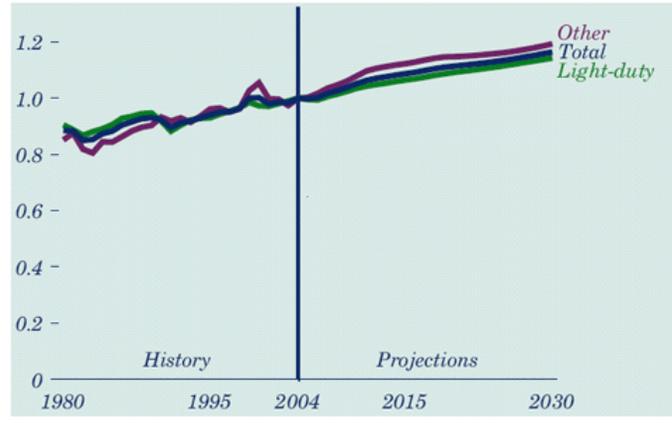
Figure 33. Delivered energy use by fuel, 1980-2030 (quadrillion Btu)



Source: Energy Information Administration

Transportation Energy Use Per Capita in 2030 is 15 Percent Over 2004 Level

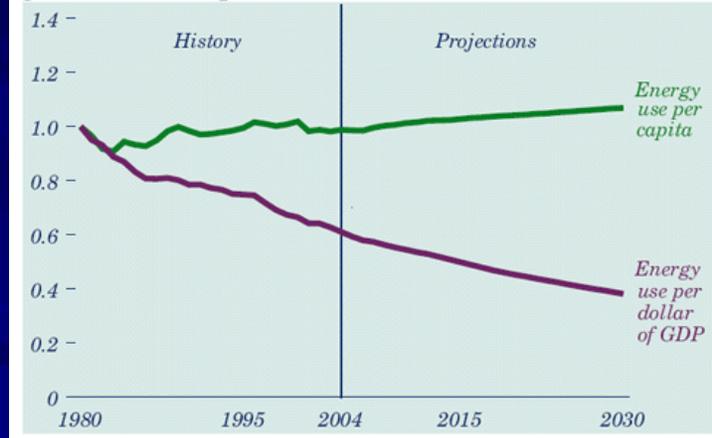
Figure 49. Transportation energy use per capita, 1980-2030 (index, 2004 = 1)



Source: Energy Information Administration

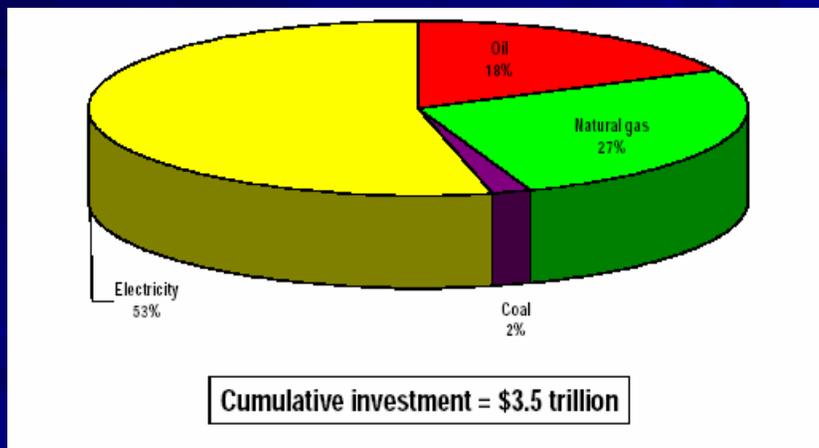
Average Energy Use per Person Increases Through 2030

Figure 31. Energy use per capita and per dollar of gross domestic product, 1980-2030 (index, 1980 = 1)



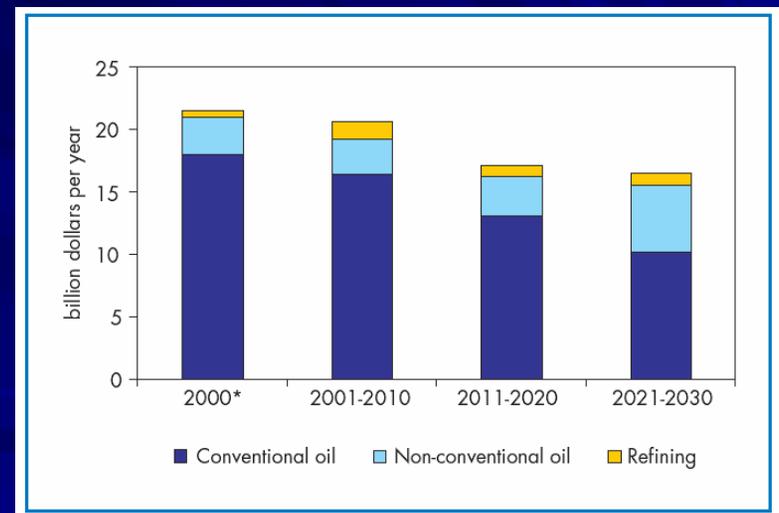
Source: Energy Information Administration

OECD North American Energy Investment by Fuel 2001-2030



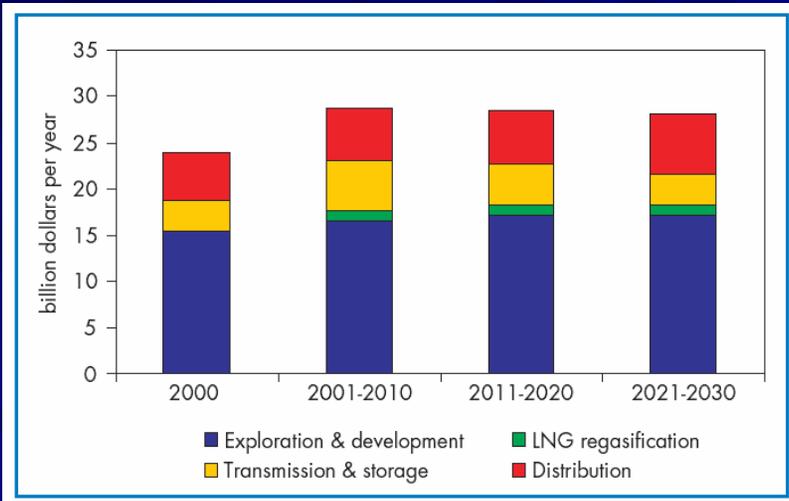
Source: International Energy Agency

Annual Average Oil Investment in the United States and Canada



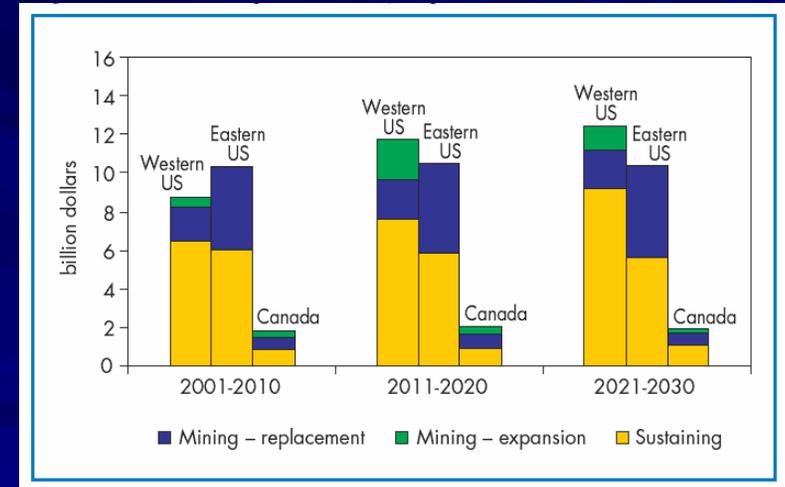
Source: International Energy Agency

Gas Investment in North America



Source: International Energy Agency

Coal Mining Investment by Region in the United States and Canada



Source: International Energy Agency

Energy Policy Act of 2005 Tax Incentives- Oil & Gas

■ Depreciation- gas distribution lines.....	\$1 billion
■ Amortization- geological/geophysical costs.....	\$974 million
■ Expensing refinery investments.....	\$406 million
■ Others.....	\$234 million

Total \$2.614 billion

EPA of 2005 (continued)

Tax Incentives- Electric

■ Transmission Depreciation...	\$1.2 billion
■ Nuclear Decommission.....	\$1.3 billion
■ Rural Cooperatives.....	\$277 million
■ Production Tax Credit for nukes..	1.8¢/kwh/\$278 million
■ Renewables.....	\$3.15 billion
■ Clean Coal.....	\$2.85 billion

EPA of 2005 (continued)

Tax Incentives- Renewables, Efficiency & Conservation

- **Alternative Technology Vehicles...** \$874 million
- **Biodiesel & ethynol.....** \$446 million
- **Residential Solar.....** \$31 million
- **Commercial Fuel Cells/
Microturbines/ Solar.....** \$222 million
- **Buildings & Appliances.....** \$1 billion

Energy Policy Act of 2005

Title I: Energy Efficiency

- Requires annual reduction in the consumption of energy by federal buildings.
- Extends the Energy Savings Performance Contracts program.
- Establishes energy efficiency for federal buildings.
- Weatherization assistance

Energy Policy Act of 2005

Title I: Energy Efficiency (Cont'd)

- Creates a grant program to help States and Local governments encourage the construction of energy efficient public buildings.
- Establishes a model building energy code compliance program.

Energy Policy Act of 2005

Title II: Renewable Energy

- Requires the Federal government to purchase a set amount of electric energy from renewable resources.
- Also directs other actions that will facilitate new development of geothermal resources.
- Reforms the hydropower licensing process of the Federal Power Act.
- Provides incentives for the increased production of hydropower.

Energy Policy Act of 2005

Title III: Oil and Gas

- Provides incentives for natural gas production from deep wells in the shallow waters of the Gulf of Mexico.
- Provides a five-year, \$20,000,000 annual authorization to the Secretary of the Interior to develop a program to remediate, reclaim, and close, orphaned, abandoned, or idled wells on Federal land.
- Alternate energy-related uses on the outer Continental Shelf.

Energy Policy Act of 2005

Title III: Oil and Gas (Cont'd)

- Energy facility rights-of-way and corridors on Federal land.
- Oil shale leasing: This section requires the Secretary of the Interior to make lands available, within one year, to lease for the purpose conducting research and development activities that will lead to new technology for producing the oil from oil shale.

Energy Policy Act of 2005

Title III: Oil and Gas (Cont'd)

- Clarifies FERC's exclusive jurisdiction under the Natural Gas Act for siting, construction, expansion and operation of import/export facilities located onshore or in State waters.
- Codifies FERC's Hackberry policy.
- Directs the Department of the Interior to perform a comprehensive inventory of oil and gas resources on the Outer Continental Shelf.

Energy Policy Act of 2005

Title IV: Coal

- Authorizes a Clean Coal Power Initiative, providing \$200 million annually for clean coal research in coal-based gasification and combustion technologies.
- Creates a program of loan guarantees and direct grants to deploy clean coal generating equipment.

Energy Policy Act of 2005

Title VI: Nuclear Matters

- Provides for programs to ensure that nuclear energy remains a major component of the Nation's energy supply.
- Price Anderson liability protection is extended through 2025 for both NRC licensees and DOE contractors.
- Establishes standby support framework through the DOE for new nuclear plant construction against regulatory or judicial delays for six reactors. This standby support would cover the delay before plant is put into operation.

Energy Policy Act of 2005

Title VI: Nuclear Matters (Cont'd)

- A research, development, and construction project is authorized for a new test reactor to be constructed at the Idaho National Laboratory.
- Strengthens security of nuclear facilities, including improved federal oversight of plant security and the expansion of federal statutes for sabotage of nuclear facilities.

16 Utility Companies Plan 25 New Nukes

May 22, 2006, Washington, D.C.- The Chairman of the Nuclear Regulatory Commission told the Senate Energy & Natural Resources Committee today that as of last week, 16 utility companies had serious plans to build 25 new nuclear power plants. "Some have announced their plans. Some have only partially announced their plans but haven't chosen the technology," he said. "This is no longer a flash in the pan. Industry is very serious. They are doing the work and investing the resources."

Energy Policy Act of 2005

Title VII: Vehicles & Fuels

- Strengthens the requirement that federal vehicle fleets use alternate fuels.
- Establishes a program to encourage the purchase of stationary and vehicular hydrogen fuel cell systems.
- Authorizes \$200 million for an advanced vehicle program.

Energy Policy Act of 2005

Title VIII: Hydrogen

- Directs the Secretary to conduct a broad-based research program supporting private sector efforts in hydrogen and fuel cell development.
- Sets a goal of enabling the private sector to make a commercialization decision on fuel cell vehicle production hydrogen for transportation by 2015.
- Supports the timely development of safety codes and standards related to fuel cell vehicles, hydrogen energy systems, and stationary fuel cells.

Energy Policy Act of 2005

Electricity

- Authorizes FERC to exercise limited jurisdiction over unregulated transmitting utilities to ensure open access to the transmission grid; protects transmission access for native load customers; and terminates FERC's proposed rulemaking on Standard Market Design.
- Directs FERC to issue rules on transmission pricing policies and authorizes FERC to approve a participant funding cost allocation plan as long as it results in just and reasonable rates.

Energy Policy Act of 2005

Electricity (Cont'd)

- Amends the Public Utility Regulatory Policies Act of 1978 (PURPA). It prospectively repeals the requirement for mandatory purchase from qualifying facilities by electric utilities if a competitive market exists and establishes new criteria for qualifying cogeneration facilities
- Bans market manipulation; prohibits false statements; addresses market transparency; protects consumers against unfair trade practices.

Energy Policy Act of 2005

Electricity (Cont'd)

- Amends Section 203 of the Federal Power Act expanding FERC's jurisdiction to include acquisition of generation facilities that are subject to FERC jurisdiction for ratemaking purposes. Applies to transactions valued in excess of \$10,000,000 and requires FERC to consider whether a proposed merger would result in cross-subsidizations of non-utility associate companies to the detriment of the utility consumers.
- Allows courts to ban traders convicted of market manipulate from holding officer or director positions in electric utility companies.

Energy Policy Act of 2005

Electricity (Cont'd)

- Improves grid reliability.
- Establishes mandatory reliability rules for the transmission system.
- Repeals the Public Utility Holding Company Act of 1935 (PUHCA) to encourage investment in the nation's electricity infrastructure.

Transmission Investment

- **1999-2003.....\$17 billion**
- **2003-2008.....\$28 billion**

Edison Electric Institute- May 25, 2006

Electric Mergers

- Exelon & Public Service Enterprise Group
- Duke Energy & Cinergy
- Mid-America & PacifiCorp
- Constellation Energy & FPC

Energy Policy Act of 2005

Title XV: Ethanol and Motor Fuels

- Requires that by 2012, at least 7.5 billion gallons per year of renewable fuel be blended into the nation's gasoline supply.
- Authorizes loan guarantees and grants for the construction of facilities to process and convert municipal solid waste and cellulosic biomass into fuel ethanol and other commercial byproducts.
- Enhances the federal leaking underground storage tank program.

Energy Policy Act of 2005

Title XVI: Climate Change

- Requires the preparation of a national strategy to promote the deployment and commercialization of greenhouse gas intensity reducing technologies and practices within 18 months of the date of enactment.
- Creates a program to assist deployment of technologies that will help reduce the emission of greenhouse gases in developing countries.

Energy Policy Act of 2005

Title XVII: Incentives for Innovative Technologies

- Creates a unified, comprehensive loan guarantee program for encouraging the commercialization of a broad spectrum of new technologies that provide clean, renewable energy at no cost to the taxpayers.

What Was Accomplished?

- **Tax Incentives**
- **Electric Power**
 - Reliability
 - Repeal PUHCA
- **LNG Facilities**
- **Price Anderson**

What Was Not Done?

- **Offshore Drilling**
- **ANWAR**
- **Cafe Standards**

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